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ABSTRACT

Focusing on whether and how research actually contributes to the formation of public policy, this paper explores the critical problems in the linkage between science production and the systems that formulate educational policy. The authors suggest that the utilization of social research is limited more by problems of integrating research into the policy process than by any inadequacy in the quality of contemporary research efforts. They argue that science not only can, but does, contribute significantly to the formation of educational policy. Policy issues are viewed as passing through stages of issue definition, deliberation of options, assignment of values and resources, and review of implementation and outcomes. The basic types of policy relevant research are defined as descriptive, explanatory, critical, and forecasting. Each research type emphasizes a different social science process and contributes to different aspects of policy making. The authors conclude by drawing together these conceptual components of the policy process and different types of knowledge into a larger model that attempts to encompass the needs of the academic and the policy maker, as well as the imperatives of action manifest in decision-making.
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SOCIAL SCIENCE AND EDUCATIONAL REFORM: THE POLITICAL USES OF SOCIAL RESEARCH

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SOCIAL SCIENCE AND EDUCATIONAL REFORM

The age of cost-benefit analysis, no matter how narrowly designed, is surely upon us. The introduction of a new paradigm of reality always generates new looks at received wisdom. So it is that recent political changes make it necessary to defend public support for scientific research primarily on the basis of its contribution to "solving public policy problems"--not on the basis of its contributions to the "advancement of knowledge" (Lambright, 1976). Debate over these alternatives bring into focus the question of whether and how research actually contributes to the formation of public policy. If a budget-conscious administration adopts a cost-benefit approach to funding scientific research, what conclusions should it draw regarding funding for educational research and evaluation? Are federal investments in educational research justifiable in terms of school improvements? Or should research funds be cut in order to help balance the budget?

Posing the question in this way reveals an important issue which has been inadequately analyzed and debated. If research investment is to be justified in terms of the utilization of science products to improve school policy and practice, we need to distinguish between problems caused by inadequate quality or relevance in the research findings themselves and those resulting from a poor linkage between research and policy formation. That is, we need a means for ascertaining whether analytically determined weaknesses in impact of a policy are the result of: a) limitations on the quality or reliability of available research products, b) the irrelevance of research to the political processes which control

educational policy formation, or c) critical problems in the linkage between science production and the systems which formulate educational policy.

This paper is devoted to an exploration of the last--the linkage problem. While much can probably be done to improve the quality of social research, we will suggest that utilization is limited more by problems of integrating research into the policy process than by any inadequacy in the quality of contemporary research efforts. Similarly, we will argue that, although research may not always shed significant light on important policy issues, science not only can but does contribute significantly to the formation of educational policy.

Before presenting this argument, it is necessary to make three preliminary observations about the context within which public policy makers work.

The Policy Makers Perceptual Field

Science Is Optional

First, we must remind ourselves that the use of research findings in policy formation is clearly optional. After all public policy was being formulated long before there was any social science. Policy makers have yet other resources for formulating and resolving policy issues. Hence knowledge, though important, is only one resource for decision making. Thus it must compete with other resources and must demonstrate that its contributions are worth the time and effort required to gather and interpret it.

Consider the distinction: policy has its origins in matters of interest, not in questions of truth. The first seeks action, the second understanding. That is, policy makers are constantly being confronted with demands to "do something" about problems, not just to understand them. No matter how sophisticated or detailed a policy maker's understanding of an issue may become, he/she will not be able to gain and exert political leadership without adopting an action orientation. Thus, for policy makers the use of science is always a practical matter. Knowledge will be used only if it enhances political influence, simplifies policy problems, or assists in identifying effective problem solutions.

The Motives of Policy Makers

A second factor to be kept in mind when approaching the question of science's impact on public policy is that policy makers are motivated to be successful--not just knowledgeable. And success in the political arena has a fairly narrow range of meanings. Three basic questions supply the criteria for self assessment for most policy makers. Their first question is: "What does it do for me or mine?" Most policy makers take office with what Carlson (1972) calls a "mandate" to accomplish certain goals for their constituents. These constituent mandates are combined with personal interests and goals to give a fairly explicit basis for evaluating most policy proposals. Decision making resources which support the legitimacy or urgency of these goals will be embraced immediately. Those that do not will be viewed with skepticism and will frequently be ignored completely.

However, in addition to specific goals, political actors must be concerned with securing and maintaining power. Hence their second criterion question is: "What does it do to enhance my chances for reelection,

acquiring higher office, or gaining greater influence in my agency?" In an influential analysis, Mayhew (1974) found Congressmen "single-minded seekers of reelection." Everything done, whether "credit-claiming" or "position-taking," is directed to assuring success in the next election. If taking a position--even one directly and unequivocally supported by research findings--weakens a policy maker's power, it will be very easy to waffle, to complain that information is not adequate, or to misinterpret information presented by others.

Beyond securing power and achieving mandated policy goals, policy makers are concerned with their own self-esteem. Especially in such local governing bodies as school boards, "civic duty" rather than "political ambition" can provide a powerful motive for entering the policy arena and for making particular policy decisions. After all, members of school boards and city councils exhibit little ambition to move up or even to stay in office (Zeigler and Jennings 1974:ch.3; Eulau and Prewitt 1973: ch.22). So, more often than not civic-minded policy makers measure their actions by the question: "is this the right thing to do?" Their responses to this question are framed in terms of cultural or ideological values which directly shape both their interest in and approach to using social research findings. Even at the national level, Kennedy's Profiles in Courage suggests, such motives can sometimes override considerations of both self-interest and political power. Policy makers responding to the call of civic duty can be expected to use information which is either compatible with their preformed value judgements or powerful enough to change their commitments.

Advocacy vs. Judgment

The third factor which must be recognized before we can come to terms with questions of research usage is that public policies, while approved by majorities, are instigated by minorities. Policy is hammered out largely in settings where a very small group of "advocates" try to gain the attention and approval of a much larger group of policy makers who react by scrutinizing and judging proposals put forward by the advocates. These "proposal judges" are concerned more with the adequacy of proposed solutions than with the urgency of identified problems. The practical value of scientific research may be quite different for the policy advocates seeking to interpret a problem or "make a case" around a particular proposal, than for the proposal judges who want to evaluate, scrutinize and weigh the alternatives.

It has been noted (Mitchell, 1981) that many important educational policy changes are the result of advocacy by a tiny handful of state legislators or other key actors. In some cases, only two or three policy actors are involved in formulating and pressing for the enactment of a proposal. Of course, more often the number is larger, but rarely have more than a few dozen people actively participated in formulating and initiating action on a specific proposal.

Research Usage: Definitions in Search of Reality

The preceding has hinted at a broad concept, that the term "research use" has not one but several meanings. Weiss (1977) recently showed that different policy participants use a half-dozen meanings, which may well account for the intellectual messiness of this concept. Some see research as political ammunition and the social scientist as a hired gun. Others see it as adding to knowledge, as providing knowledge about potential

program alternatives, as methods for system maintenance, and, possibly most significantly, for conceptualizing the nature of the policy issue in a way which sensitizes policy makers to new options. As Weiss concludes, however, this term's "usual definition, the direct application of research findings to solve a specific problem, is not the common pattern....The ways that most social research is 'used' are much more diffuse and circuitous" (1977:10). Her volume displays studies of federal policy makers which undergird these multifaceted meanings.

So what if different actors in and out of the policy process mean different things in using knowledge from the social sciences? As scholars, we know much about the "proper" uses of social science within norms set by our professions. We are repelled by policy makers who would use us as hired guns, to make a case for a cause. However, these officials often reject our methods and findings because they appear irrelevant to the clash of issues in the policy arena (Aaron, 1978). Before suggesting an integration of these opposed usages, examine just one quality of the academic and policy worlds which heighten these differences.

Time Enough

Perhaps the greatest single difference between the world of the social scientist and the policy maker is their contrasting time perspectives. Since C. P. Snow's (1959) classic work contrasting political and scientific cultures, many have argued that this difference in time perspective presents the greatest obstacle to the integration of research and evaluation findings into the policy making process. Policy makers, as Mitchell (1981:32) puts it, must

> deal with pressures that are diverse, incessant, intense, simultaneous, difficult to clearly identify and encountered in ways that make it difficult to distinguish legitimate from illegitimate interests. From this boiling caldron of desires, interests and demands, (they) must select some concerns for action and neglect or reject the others.

For them it is always Marvel's "time's winged chariot hurrying near."

By contrast, scientists have rather long time-lines in the conduct of their work. Beginning with their earliest professional training, they are constantly urged to be skeptical of present knowledge and to avoid rushing to judgment about either their conclusions or the social relevance of their work. For them, it is always the Psalm's "A thousand years in Thy sight, are like an evening gone."

Wirt (1980) has pointed out some of the reasons why social research time lines are already so long and why they should probably be still longer in order to improve the reliability of the knowledge being produced. Scientists need time not only to gather and interpret data. They also need it to develop and test research methods, to replicate promising studies, to corroborate their conclusions, to allow institutional changes under study to mature, and to examine the longitudinal effects of changes in social policy and conditions.

Too often discussions of the different rhythms of policy formation and social research stop with an emphasis on the sense of crisis which sets the policy process apart from the work of research. However, we should note that public policy also takes time to evolve. As Mitchell (1981) puts it,

> Responding to political pressures and interests takes time. It takes time to sort out the pressures and determine exactly what problems people are asking to have solved. It takes time to determine whether a proposed policy would be damaging t› the interests of

> others or is adequately responsive to the original problem. It takes time to discover how broadly or intensely particular policy options are supported by various constituent groups or the public. And it takes time to determine whether a policy is important enough to justify the expenditure of scarce resources on its implementation.

Policy Making: A Frame of Reference

If academic and official approaches to the uses of knowledge are so different in their conceptions of time and other matters, are the two inherently incompatible? Must the academic always frustrate the official and the latter misuse the former? We suggest not, if one distinguishes among the various types of knowledge with which scholars work and if one relates the use of these different types to specific stages within the evolution of public policy decisions.

As Mitchell (1981) argues, public policy formation (at least in the legislature) is divided into four distinct stages. Each stage is characterized by different groups of key actors and different types of decision-making behavior.

Borrowing liberally from Mitchell's conceptualization of these four stages (and from similar work by Florio, 1980; Jones, 1977; and Wirt, 1980) we would suggest that policy issues typically pass through each of the four stages identified in Figure 1. As indicated on the figure,

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Insert Figure 1.

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political action is only initiated when there are unfulfilled interests or demands among a policy body's constituency groups. Before policies can be formulated, however, these interests must be formulated as "issues." That

is, they must be articulated in ways that call for recognizable and specific actions on the part of the policy body. Issues emerge only after at least one specific proposal for action has been presented to policy makers. Thus, for example, poor student achievement is not a policy issue--but minimum competency testing is. Similarly, labor-management conflict is not a policy issue--collective bargaining is. The former represent clear problems and interests, but only the latter are concrete actions which can be debated and adopted (or rejected) as policies.

The second stage in public formation begins as soon as specific proposals have been brought to the attention of the policy making body. Once defined, an issue cannot be resolved until policy makers are able to determine: a) whether the proposal(s) being made would be damaging to the interests of others whose legitimate concerns (or political power) must be balanced against those behind the original proposal, or b) if competing proposals dealing with the same or related issues are also being put forward. Policy makers must, in other words, specify alternative actions and deliberate the merits of various policy options.

During this second stage, policy makers formulate an overall interpretation of the issue(s) being resolved, and adopt a particular strategy for attacking (or perhaps avoiding) it. Thus, for example, many states formulated collective bargaining statutes which included special provisions for accomodating public or client interests into the negotiating process. Frequently the inclusion of one of these provisions rendered the policy unacceptable to the teacher groups originating the demand for action--resulting in an abandonment of the whole issue. And in some

states, an acceptable accomodation of client and teacher interests was reached or the client access question was dropped before the final policy was written.

A third distinctive stage in the formation of policy begins once it is clear that a proposed policy has reached its final form and must be either adopted or rejected. As Mitchell (1981) argues, final form is reached at the point when policy makers realize that further modification of a proposed policy would cause more current supporters to turn against it than opponents to accept it. This third stage, labeled "Authoritative Allocation" in Figure 1, encompasses what is normally meant by making a policy "decision." At this stage, a policy body has to determine whether a proposal is sufficiently important to deserve assigning needed resources and/or attention to it. Many issues which produce acceptable solutions when considered entirely on their own merits do not appear important enough to deserve support when compared with other pressing policy problems. In state legislatures, the finance committees bear the major responsibility for sorting out priorities and assigning resources (Mitchell, 1981).

The fourth stage in policy formation is that of overseeing the performance of policies once they have been adopted. For a policy body, oversight involves reviewing both the implementation and the outcomes of a policy in order to determine whether it has produced the intended effects. For many political actors, this performance oversight stage is of little direct interest because it requires tedious attention to data (which are often hard to collect) and because it offers little political pay-off. Only those policy makers who are critical of policies adopted by others can expect the oversight process to boost their political stocks.

Types of Social Research

Recent analysis has distinguished among four basic types of policy relevant research (Johnson, 1975): 1) descriptive, 2) explanatory, 3) critical, and 4) forecasting. As indicated in Figure 2, each of these four research types emphasizes a different social science process and contributes to different aspects of policy making.

Insert Figure 2.

Descriptive research emphasizes the development of categories for classifying social events and processes. It is the most basic form of research and contributes to policy primarily by helping to establish systems for distinguishing among essentially different social and political circumstances or events. Thus descriptive research contributes to policy largely by assisting in the enumeration of social statistics (e.g., how many school districts have collective bargaining agreements, or what is the distribution of minority children among school in a district?). If it is combined with a suitable ideological analysis of political values, descriptive research also helps to lay the ground work for defining policy problems. By elaborated case studies, or by identifying the frequency and distribution of various social characteristics, such research can help give a sense of the significance or pervasiveness of a policy problem.

Explanatory research involves the creation and testing of competing hypotheses about the causes of social events. The arsenal of quantitative analysis developed over the last half-century or so, along with anthropological

field study techniques, are the most powerful explanatory tools currently available to social scientists. Such research contributes directly to social policy formation by offering an analysis of fundamental social forces and by providing various diagnoses of the psychological and social causes responsible for policy problems.

The third type of policy relevant research--critical--focuses on comparative analysis among different policy strategies or policy goals. Critical research seeks to determine whether a policy or program is reaching its intended goals. For example, is student achievement being improved in response to statewide minimum competency testing? Are more minority teachers being hired as a result of affirmative action regulations? Do exceptional children who are mainstreamed receive suitable educational programs?

This kind of research provides policy makers with a cost/benefit framework for evaluating whether investments in a particular policy or program are worthwhile. It also provides a basis for assessing the virtues of alternative policy proposals and thus helps to provide a basis for choice among competing approaches to a problem.

The fourth basic type of policy relevant, forecasting, relies on techniques of modeling social behavior. These enable researchers and policy makers to project or predict future consequences of changing social policies or conditions. In addition, forecasting research can be used retrospectively to evaluate policy outcomes. In this case, the behavioral model is used to compare the performance of the policy system under a particular policy with that which would have resulted had it not been adopted.

The four different types of social research are by no means equally available to policy makers or to education research. Fairly sophisticated modeling techniques have been developed in economics, and to a lesser extent in demography. However, they are quite weak in sociology and political science, and are virtually non-existent in education. A few critical research studies can be found on education policy issues (a good example is the Rivlin and Timpane, 1975, study of the Headstart program). But those that exist, tend to be limited to financial and standardized achievement test variables.

In the area of explanatory research, education scholars have been more active. Unfortunately though, education lacks sufficiently robust theoretical foundations. Hence, contradiction and divergence of findings, rather than comprehensive explanation, characterize most of the work in this area. Finally, education research abounds with descriptive analyses. As a result much is known, but little is understood systematically, about how schools affect children, learning, or the larger society.

Integrating Research and Policy

We would like now to draw together these conceptual components of the policy process and different types of knowledge into a larger model. This will attempt to encompass the needs of the academic and the policy maker, as well as the imperatives of action manifest in decision making.

From the foregoing, we suggest that science utilization by policy makers will depend largely on four factors. First, use will depend on the motives of individual policy makers. Policy advocates, seeking to initiate or stop reforms, will have very different attitudes toward social research from those of the proposal judges who are primarily

concerned with screening and evaluating the advocates' proposals. Second, utilization will be affected by the decision-making stage in which a policy is located. That is, policy makers require different types of information during each of the four basic policy making stages. (Wirt, 1980). Third, utilization will depend upon whether the type of social research needed to address various policy issues is available at the time that the issues are passing through the policy system. And finally, utilization will depend on the personal interests and abilities of the policy makers involved in each issue, as well as on whether they have other, more effort-efficient resources for shaping their decisions.

Figure 3 presents a framework for interpreting the first three of these factors. The rows of the figure reproduce the four policy-making stages discussed in connection with Figure 1. The columns of the figure distinguish among the proposal judges' and the policy advocates' needs for usable information (the latter group is divided into supporter and opponent sub-groups). Within the cells of the figure are listed the following: the primary information needs of the policy makers, in capital letters; the character of the social research which would best address those needs; and a rough assessment of how successfully current educational research and evaluation products serve those needs.

Insert Figure 3.

Science and Issue Definition

During the first stage, when political interests are being turned into policy issues, policy advocates who wish to develop support for a particular proposal need information and analysis which can be used to

conceptualize and define issues. In the language of Cobb and Elder (1972) they need "condensation symbols." These enable them to present their interests in a form which makes sense to the less concerned policy makers who are judging the merits of proposed actions. Social theory construction is the form of scientific product which best supports this need.

But policy makers playing the role of proposal judges to not need comprehensive theories. They need rich-textured, descriptive information which will enable them to interpret the proposals put forth by others. Their interest in research data will be high only if the policy issue appears to be complex and "scientific" in character. If "common sense," constituent interests, or personal experience can provide a convincing basis for interpretation, they will probably bypass formal research products as too time-consuming to be useful.

Opponents of emerging policy proposals, however, will be interested in any information which can deflect attention away from the issue or disrupt the potential support of others. Hence, these policy makers will be keenly attracted to anomalous or contradictory research findings.

In the case of education policy, the supporting policy advocates (i.e., the reformers) have the weakest social science support. Neither organizational nor psychological learning theories currently go very far toward providing a convincing basis for educational reform. Sophisticated opponents of reform are in a relatively strong position, able to cite contradictory findings on most major issues. The proposal judges can find a moderate level of support for their work in current research. Both case and survey data are available to shed at least some descriptive light on most issues.

Once proposals are formulated, and policy makers enter the deliberation of options stage, there is a shift in both the needs for information and the relative strength of what is currently available. The reformers need information which helps them to integrate diverse interest groups and to reconcile divergent policy proposals. As options are being analyzed and sorted, reformers need to develop social explanations which show how various factors in the social system are correlated with one another.

At this stage, the opponents of reform find that their greatest strength lies in diffusing the supporters. They can do this either by showing that reformers cannot count on the predicted results of a policy, or by showing that there is no real basis for claims about the benefits of a proposal. Their greatest resource in this regard is methodological critique of existing research or analysis. Of this, there is no end.

The proposal judges during the deliberation stage are primarily concerned with how to analyze the claims and counter-claims of supporters and opponents of reform. They want explanatory information which provides a convincing description of the ecology (and if possible the future course) of the issue under consideration.

It is during this second stage that social research has provided its greatest support to educational reform. The Coleman study (1966) and more recently the Rand Corporation change agent studies (1975, 1976) have led the way in offering policy advocates a sense of direction for change. However, close behind the advocates for reform have come their critics who have found methodological and conceptual flaws in most major research studies (e.g., on Coleman, see Luecke & McGinn, 1976). It is

the less partisan proposal judges who have had a hard time finding satisfactory explanations in research scholarship (Aaron, 1978).

During the third policy stage--authoritative allocation--the reformers need information that will serve to persuade uncommitted proposal judges in order to get the approval and resources needed to implement new policies. Causal modeling is the most effective research tool for this task. Opponents of change, on the other hand, seek information that will embarass or intimidate proponents (as well as information to persuade the uncommitted). Research which produces support for explanations running counter to those used by reformers is quick to get their attention.

For the proposal judges, allocation decisions rest on their confidence that the predicted outcomes of a proposed policy will indeed be forthcoming. Thus the judgment-oriented policy maker will find forecasting research to be most useful.

As indicated earlier, forecasting research in education is almost non-existent, and causal modeling research is both rare and weak. Thus the opponent of change is most likely to find this research of interest because it will serve as a tool for winning policy debates.

During the fourth stage--oversight of performance--the reformers are most interested in information that will permit them to defend an adopted reform. Such a defense is easiest when a credible inventory of achievements attributable to the reform can be developed. For opponents of reform, criticism is the driving force behind any search for information. Such criticism is most frequently supported if an overall evaluation of all effects attributable to a new policy or program is undertaken. As

suggested by Wirt (1980), such evaluations usually lead to "no significant effects" findings because institutions take more time to change than the policy evaluators are typically willing to give them (see also Salamon, 1976).

Neutral policy makers, interested in formulating impartial judgments about reforms, are helped in their assessments by appraisals of the extent and ease of implementation for the new policies. They usually recognize the limited value of outcome evaluations and find that problems in implementation are most likely to indicate that the policies should be abandoned.

Available social research findings lend greatest support to program and policy critics. They are often able to argue that any negative or inconclusive findings regarding a policy are to be taken at face value. Proponents are in the weakest position because even when positive achievements are documented it is usually impossible to be certain that these are not the result of some changing social circumstances unrelated to the policies in question.

A particular limitation in most research designs also mitigates against finding reform effects. This is the typical focus of policy impact research upon only a single program at a time. Whether a case study (Pressman and Wildavsky, 1973) or multiple-case studies (Murphy, 1975), whether it relies on census or sample, most evaluation research pays little attention to multiple programs clustered around a problem area at a given governmental level, say, the school site. If one's interest is only Program A, whether studied cross-sectionally or over time, the design ignores the presence of related Programs B, C....N, and their interaction effects. But it is exactly this perspective that state

and local officials employ in assemblying a repertoire of programs to deal with a given policy need. Interaction effects may be treated as part of a regression analysis, but rarely is one of the variables so analyzed a parallel, possibly reinforcing, program.

This paper has described the basically political quality of research usage. Research does not stand aloof from the cut-and-thrust of the politics of policy making. Nor is the social scientist simply a samurai, looking for a policy lord. We suggest some implications flow from this conceptualization which touch on the forces of stasis and change in the the policy world.

1. This perspective on research uses means that knowledge becomes adapted to the essentially incremental nature of the political system. Just as new policy must work its way through "the labyrinths of democracy" (Eulau and Prewitt, 1973) in laborious style, so knowledge becomes adapted to that process. It is not monolithic, but multi-faceted. It is not permanent but altering with new signals from experience. It is not an abstract precept but open to an existential world. Not frozen in place or time, like a fly in amber, knowledge describes, explains, criticizes, and forecasts a world where policy maintenance and change interact constantly.

2. This interaction of knowledge and policy reflects the basically non-ideological nature of American politics. Figure 3's model of the intersections of knowledge functions and actor behavior would not be possible if we possessed an ideology which predetermined all relationships between society and the political system. Rather, that model points to the basic thrust of individual and group interest in that system. American political interests seek whatever level, institution, or resource are

lying about in order to protect and enhance themselves. This impulse generates a centrifugal force in society which makes difficult any overarching set of values to bind members in a civil community. It also makes it difficult to get agreement on the proper uses of knowledge. We are millenia away from the Greek concept of knowledge as virtue, for we act as if knowledge is power. And power eschews any grander purposes than survival and expansion.

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FIGURE 1. FOUR STAGES IN PUBLIC POLICY FORMATION

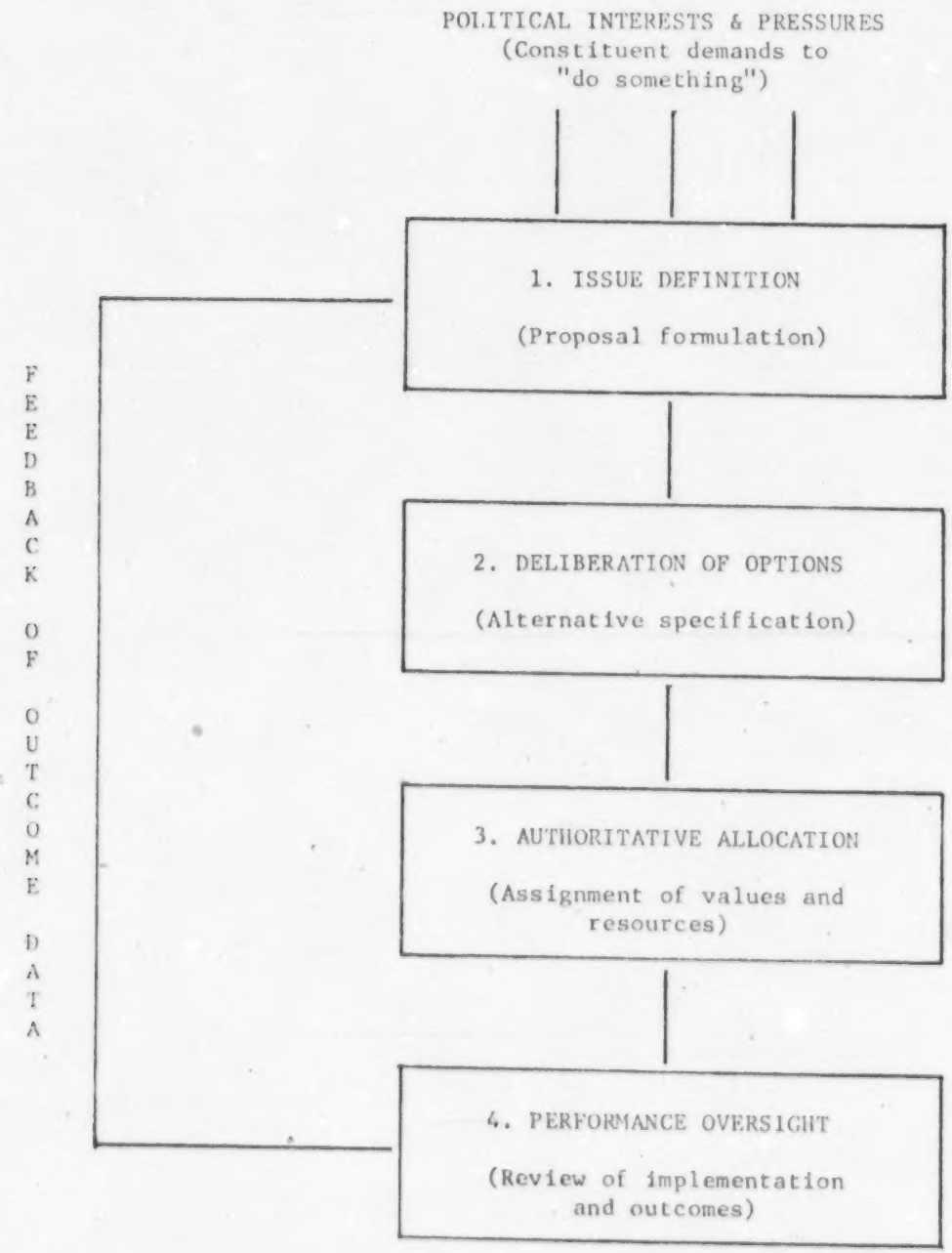

FIGURE 2. THE POLICY CONTRIBUTIONS OF FOUR TYPES OF SOCIAL RESEARCH

RESEARCH TYPE	POLICY CONTRIBUTIONS
1. Descriptive research (Category development)	Ennumeration of social statistics. Policy problem definitions.
2. Explanatory research (Variable correlation)	Analysis of social forces. Diagnosis of problem causes.
3. Critical research (Comparative analysis)	Cost/benefit analysis of policy alternatives. Assessment of policy proposals.
4. Forecasting research (Behavior modeling)	Projecting/predicting social consequences. Evaluation of policy outcomes.

FIGURE 3. SCIENCE UTILIZATION BY POLICY ADVOCATES AND PROPOSAL JUDGES AT EACH POLICY MAKING STAGE

	USAGE BY PROPOSAL JUDGES	USAGE BY POLICY ADVOCATES: THE REFORMERS	THE OPPONENTS
1. ISSUE DEFINITION	INTERPRET ---- Descriptive analysis (Moderate)	DEFINE ---- Theoretical frameworks (Weak)	DEFLECT ---- Anomalous findings (Strong)
2. DELIBERATION OF POLICY OPTIONS	ANALYZE ---- Explanation of etiology (Weak)	INTEGRATE ---- Correlation of factors (Strong)	DIFFUSE ---- Critique of methods (Moderate)
3. AUTHORITATIVE ALLOCATION	PREDICT ---- Forecasting outcomes (Weak)	PERSUADE ---- Causal modeling (Moderate)	INTIMIDATE ---- Counter instances (Strong)
4. OVERSIGHT OF PERFORMANCE	ASSESSMENT ---- Appraisal of implementation (Moderate)	DEFENSE ---- Inventory of achievements (Weak)	CRITICISM ---- Evaluation of effects (Strong)